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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,350	04/07/2006	Wendelin Egli	27793-00107USPX	9051

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EXAMINER	
BARNES, CRYSTAL J	
ART UNIT	PAPER NUMBER
2121	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,350	EGLI ET AL.	
	Examiner	Art Unit	
	Crystal J. Barnes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 9-13* is/are rejected.

7)☒ Claim(s) *7 and 8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11 Jan. 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1-13 are pending in this application.

Priority

2. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 365(c) is acknowledged. Applicant has complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 365(c).

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The examiner has considered the information disclosure statement (IDS) submitted on 11 January 2006.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "data recording and display unit 1" on page 4 second paragraph. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should

appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the section heading should be omitted:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

7. The disclosure is objected to because of the following informalities: "d" on page 3 last line is unclear. Appropriate correction is required.

Claim Objections

8. Claims 9 and 10 are objected to because of the following informalities: "according to claim 6 and any one of claims 5 or 6" is redundant. Appropriate correction is required.

9. Claim 13 is objected to because of the following informalities: "network ready components setup, reader, viewer and online " is unclear. Appropriate correction is required.

10. Claim 13 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim 13 has not been further treated on the merits.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 5, 6, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Regarding claims 5 and 12, the phrase "for example" renders the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

14. Regarding claim 6, the term "etc." renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "etc."), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

15. Claim 13 provides for the use of a control program, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

16. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 1-6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,481,481 to Frey et al. in view of USPN 6,124,806 to Cunningham et al.

As per claim 1, the Frey et al. reference discloses a data recording and display unit (1) that can be connected for data exchange by means of a communications controller (23) (see column 3 lines 55-59, "interface unit 12") and a signal converter (24) (see column 4 lines 27-30, "analog to digital converter 313") to a serial or parallel interface (25) ("serial interface 314") of a computer (21) (see column 3 lines 44-49, "controller 10"), consisting of various units (3) and a basic unit (2) (see column 3 lines 49-55, "plurality of data loggers MDL*"), which are connected to each other by a control bus (12) and a data bus (13) ("cables 11, 13"), and are synchronised by means of a single real time clock (20) (see column 4 lines 63-57, "clock 315") on the basic unit ("data loggers MDL*"), and of at least one module (4) ("data loggers MDL*") which comprises at least a sensor (5) (see column 4 lines 21-24, "plurality of sensor modules SM1-1 to SM1-4"), a controller (10) ("controller 10" and see column 4 lines 24-27, "microprocessor 311") and a memory (11) ("memory 312") for recording and storing data (see column 4 lines 58-63, "store in digital form"), optionally may have a transmitter (see column 4 lines 34-

38, "radio frequency link 318, serial interface 314") and receiver ("interface unit 12"), amplifier, converter ("analog to digital converter 313") or combinations thereof between sensor (5) ("sensor modules SM1-1 to SM1-4") and controller (10) ("controller 10, microprocessor 311"), stores in its memory (11) ("memory 312") each measuring point (see column 4 lines 39-42, "data") together with the clear time ("clock 315") of the measurement ("measured") generated by the real time clock (2) ("clock 315"), characterised in that even without an exchange of modules many sensor combinations are made possible by connecting different combinations of sensors to a module, the modules (4) themselves record the sensor combinations connected to them by carrying out a setup routine after the unit (1) is switched on, the configuration data for the individual sensors (5) remain stored to enable sensors (5) already configured to be connected or omitted without this necessitating a reconfiguration on the PC (21).

The Frey et al. reference does not expressly disclose even without an exchange of modules many sensor combinations are made possible by connecting different combinations of sensors to a module, the modules (4) themselves record the sensor combinations connected to them by carrying out a setup routine after the unit (1) is switched on, the configuration data for the individual sensors (5)

remain stored to enable sensors (5) already configured to be connected or omitted without this necessitating a reconfiguration on the PC (21).

The Cunningham et al. reference discloses

(see column 6 lines 9-17, "A plurality of sensor interface modules 102, which are electromechanical interfaces, act as data gathering equipment. Sensor interface modules 102 communicate with data collection modules 110 through a hardwire or wireless transmission 108. Standard wire connection may be utilized for the hardwire or wireless transmission 108, or various types of known, low-power, radio-frequency transmissions may be utilized.")

(see column 7 lines 19-27, "The data collection modules 110 transmit the information received from the sensor interface modules 102 over a data module connection 116 to a network system 118. The network system 118 forwards the transmitted information over a network connection 120 to a host module 122 where the information is stored or processed. The stored or processed information may then be transmitted from the host module 122 through a host connection 124 to the customer interface 126.")

(see column 31 lines 24-29, "Information received from new sensor information modules that have not been configured in the host module, will still be

processed by the data collection module and transmitted on to the host module. The host module will identify any new sensor information modules and prompt the system user for the required configuration information.")

(see column 31 lines 57-64, "Information that is placed into memory is maintained until overwritten by new information. The data collection module uses a rolling information storage method to maintain information for extended periods while maximizing the system resources. New information that is received from sensor interface modules is written over the oldest information for that module.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the diagnostic system taught by Frey et al. with the memory system of the data collection module taught by Cunningham et al.

One of ordinary skill in the art would have been motivated to modify the diagnostic system with the memory system of the data collection module to provide a maintained information-overwrite system to maintain information for extended periods whole maximizing the system resources.

As per claim 2, the Cunningham et al. reference discloses commercially available measuring instruments (see column 31 lines 24-30, "new sensor information modules") can be incorporated in the same way as sensors (see column

32 lines 30-32, "sensor interface modules 102") by means of special modules ("data collection module"), and supply measured values ("data") synchronised by this method of incorporation with the other modules ("sensor interface modules 102") installed.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the diagnostic system taught by Frey et al. with the wide area remote telemetry taught by Cunningham et al.

One of ordinary skill in the art would have been motivated to modify the diagnostic system with the wide area remote telemetry to simplify remote sensing information collection and information distribution systems.

As per claim 3, the Frey et al. reference discloses the control bus (12) ("cable 11, 13") connects the controller (22) ("controller 10") to the communications controller (23) ("interface unit 12") and the controllers (10) ("controller 10") on the basic unit (2) and the units (3) ("plurality of data loggers MDL*"), a data bus ("cable 11, 13") connects all the memories (11) ("memory 17, memory 312") on the basic unit (2) and the units (3) ("plurality of data loggers MDL*") directly to the communications controller (23) ("interface unit 12").

As per claim 4, the Frey et al. reference discloses a module (4) ("plurality of data loggers MDL*") is present on the basic (2) ("data loggers MDL*") for measuring each of the following: triaxial accelerations (see column 4 line 4, "air flow"), pressure (see column 4 line 5, "static air pressure") and temperature (see column 4 lines 4, "temperature").

As per claim 5, the Frey et al. reference discloses any module (4) ("data loggers MDL*"), for example a transmitter module, is able to take over control of the control bus ("cable 11, 13"), wholly or in part (Multi-master operation) ("radio frequency link 318, serial interface 314").

As per claim 6, the Frey et al. reference discloses a transmitter module ("data loggers MDL*") is able to read the measured data ("data") via the data bus (13) (see figure 1, "cable 16*") and transmit ("cable 11, 13") the data to a computer (21) ("controller 10"), the transmission method (WLAN, Bluetooth, radio, etc.) ("radio frequency link 318, serial interface 314") can be freely selected by means of corresponding modules ("data loggers MDL*, interface unit 12").

As per claim 9, the Cunningham et al. reference discloses it can record data from a motor vehicle or aircraft (see column 1 lines 28-29, "other areas where remote monitoring is necessary").

As per claim 10, the Cunningham et al. reference discloses it can record data from medical and/or sports medical data (see column 1 lines 28-29, "other areas where remote monitoring is necessary").

19. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,481,481 to Frey et al. in view of USPN 6,124,806 to Cunningham et al. as applied to claims 1-6, 9 and 10 above, and further in view of USPN 6,457,021 B1 to Berkowitz et al.

As per claim 11, neither the Frey et al. reference nor the Cunningham et al. reference expressly discloses the memories (11) of the modules (4) are divided into pages (42), which in turn each consist of a header (43) and a data area (44), in that configuration data from a measurement are stored in the header (43) and the measured data together with the times of the measurement are stored in the data area (44), so that the measurement can only be reproduced from the data in the memories (11).

The Berkowitz et al. reference discloses

(see column 14 lines 11-17, "A shared memory page comprises a header, a timestamp array, a slot array, and a data section. The header contains a page

identifier, the number of entries (data base records, index keys, look-aside tables) stored on the page, a pointer to free space within the data section, and the size of the free space. The timestamp array stores a timestamp value for each page entry.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the memories taught by Frey et al. and Cunningham et al. to include the shared memory taught by Berkowitz et al.

One of ordinary skill in the art would have been motivated to further modify the memories to include the shared memory to maintain consistency.

20. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,481,481 to Frey et al. in view of USPN 6,124,806 to Cunningham et al. as applied to claims 1-6, 9 and 10 above, and further in view of USPN 5,726,369 to Gilday.

As per claim 12, neither the Frey et al. reference nor the Cunningham et al. reference expressly discloses the modules (4) are able to withstand major force and heat influences without damage due to a special method of construction, for example casting in resin and equipping with ceramic heat shields.

The Gilday reference discloses

(see column 3 lines 8-10, "A thermosetting plastic such as epoxy casting resin is desirable to be selected for the material so as not to be heat degradable.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the components of the diagnostic system taught by Frey et al. and the wide area remote telemetry system taught by Cunningham et al. to include the thermosetting plastic taught by Gilday.

One of ordinary skill in the art would have been motivated to modify the components of the diagnostic system and the wide area remote telemetry system to include the thermosetting plastic such as epoxy casting resin which is a material that is not heat degradable.

Allowable Subject Matter

21. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to modular/remote measurement interfaces:

USPN 6,885,309 B1 to Van Heteren

USPN 6,873,936 B2 to Reel et al.

USPN 6,856,247 B1 to Wallace

USPN 6,721,689 B2 to Markle et al.

USPN 6,662,066 B1 to Yu et al.

USPN 6,651,030 B2 to Victor et al.

USPN 6,233,534 B1 to Morozumi et al.

USPN 5,999,494 to Holzrichter

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Crystal J Barnes

CRYSTAL J. BARNES
PRIMARY PATENT EXAMINER
CJB
27 March 2007